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- Cathelin, Hervé  
75016 Paris (FR)
- Hébert, Christian  
60540 Bornel (FR)
- Nouyrit, Olivier  
92200 Neuilly (FR)

(71) Applicant: **Société des Produits Nestlé S.A.  
1800 Vevey (CH)**

(74) Representative: **Vuille, Roman et al  
Avenue Nestlé 55  
1800 Vevey (CH)**

(72) Inventors:  
• Blanchet, Jean  
59360 Le Cateau (FR)

(54) **Pizza preparation & delivering method**

(57) The present invention relates to pizzas and pizza-type products preparation and delivery method. The present invention deals with a method for providing to consumer a freshly baked pizza-type food product using individually frozen ingredients, combining them and

baking them in less than 5 minutes ; the individually frozen ingredients and the pizza-type food product being respectively stored and baked in a mobile, compact and energetically autonomous baking-selling unit.

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## Description

[0001] The present invention relates to pizzas and pizza-type products preparation and delivery method.

[0002] Pizzas and the like are food products having immense popularity among consumers. Generally consumers have to leave their homes or place of work and travel to a pizza restaurant if they want a high quality fresh baked pizza. There are also other alternative methods of obtaining a pizza or pizza-type product. Such kind of pizza-type products may be pizza, bruschetta or focaccia, for example. One can purchase frozen pizza-type product, raw or pre-cooked, cook a fresh chilled pizza-type product or even prepare a pizza-type product from fresh ingredients. Ordering a pizza often results in disappointment for the pizza lovers due to delay and because the delivered pizza can be lukewarm and soggy.

[0003] The use of frozen pizza-type products does not lead to satisfactory results. In general, these type of products are pre-cooked and thus once reheated, they do not exhibit quality of a fresh baked product. On the other hand the baking or the heating of frozen pizza is generally a long step, typically 15 to 20 minutes, for example. This fact is particularly limiting in the case of pizza-type product to be delivered to consumer « on the move ». In this kind of situation, consumer does not want to wait more than a few minutes.

[0004] Traditional « on the move » pizza-type products baking-selling structures such as trucks or vans use chilled ingredients and are used to prepare the dough on their own. In such a case, arises the problem of the preservation and storage of these fresh ingredients. Finally, at the end of the day, some non-used ingredients can be stored under chilled condition, some have to be thrown out. In any case, this leads to an unequal and irregular quality for the product and to loss of money due to loss of raw material. Further, it implies complicated supply chain management since all the different products do not exhibit the same shelf life. Other problems with the use of this kind of cooking-selling structure is the price, the bulkiness and the energetic dependence of chilling and cooking devices comprised in such vehicle.

[0005] There is a need from consumer for pizza and/or pizza type products of high quality that can be prepared and delivered in a few minutes. Further, there is also a need for customers for methods and means for delivering pizza-type products to consumer through a simple, cheap and non-bulky cooking-delivering vehicle. Further, customers also aim to deliver constant quality product to consumer with a minimum of loss and a minimum of safety risks.

[0006] To this end, the present invention is directed to a method for providing to consumer a freshly baked pizza-type food product using individually frozen ingredients, combining them and baking them in less than 5 minutes, preferably less than 4 minutes and more pref-

erably less than 3 minutes ; the individually frozen ingredients and the pizza-type food product being respectively stored and baked in a mobile, compact and energetically autonomous baking-selling unit.

[0007] In the present context, as "pizza-type food product", it should be understood a food product comprising a dough based product covered with a topping comprising vegetables, meat, cheese, spices, herbs and/or fat, for example. The dough based product used for the fabrication of a pizza-type product in the context of the present invention may be a pizza crust, bread crust, bread slice or pie crust, for example.

[0008] The dough-based product used in the present invention as part of the individually frozen ingredients may be a frozen pre-baked or at least partially baked pizza crust, pie or bread slice, for example. Furthermore the dough-based product used in the present invention may be coated with a small amount of a foodstuff such as tomato purée and/or cheese or a layer of fat, for example. However it should be kept in mind that the dough-based product which is frozen does not contain all the topping ingredients of the final pizza-type product.

[0009] The individually frozen ingredients used for the preparation of the pizza comprise the frozen dough-based product and all the different frozen topping ingredients. Such topping ingredients may be cheese cubes or slices, grated cheese, pepperoni and tomato slices, tomato purée cubes, pepper and onion rings, sliced mushrooms, minced meat, ham cubes, and other kind of vegetables or meat product gratted, minced, chopped or in the form of cubes, for example. All the ingredients used are individually frozen and individually stored by category in boxes in a freezer device comprised in the mobile unit. Dough-based products are also stored as frozen in the freezer device of the unit used according to the invention. The frozen dough-based product used is preferably a pre-proofed and pre-cooked frozen dough-based product. All the individually frozen ingredients used for the fabrication of the pizza-type product according to the invention may have previously been prepared, sliced, grated or shaped, individually frozen and packaged prior to transit, in a factory for example.

[0010] The combining step may be achieved by disposing the frozen topping ingredients on the frozen dough-based product. Once combined, one obtains a pizza-type product made from frozen ingredients that can be baked directly or can rest for a short time under chilled conditions. The use of individually frozen ingredients has the advantage to give the possibility of customising *ad infinitum* the pizza-type product instead of having a frozen pizza-type product as a block of ingredients that are attached. Further, such product is close to traditional pizza or pizza-type product made from fresh ingredients for the consumer point of view but does not have the drawbacks previously exposed.

[0011] The key steps of the method according to the invention are the following :

- storing individually frozen pizza-type ingredients in a freezer disposed in a mobile, compact and energetically autonomous unit,
- disposing all the individually frozen topping ingredients on a frozen dough-based product,
- baking the frozen pizza-type product thus formed in less than 5 minutes in an oven disposed in the mobile unit.

**[0012]** The mobile, compact and energetically autonomous baking-selling unit that can be used for delivering the pizza-type product according to the invention may be a vehicle such as a truck or van. As « compact », it should be understood that the vehicle has a length of less than 4 meters, preferably less than 4 meters and high of less than 2,5 meters, preferably about 2 meters. The vehicle may be a self-powered vehicle having a driver's compartment with a driver's seat and a cargo's compartment behind the driver's compartment, for example. The cargo's compartment may exhibit a volume of less than 4 m<sup>3</sup>, preferably less than 3 m<sup>3</sup> and more preferably about 2,5 m<sup>3</sup>. This cargo compartment may comprise a freezer for storing frozen dough-based product and individually frozen ingredients of the topping. Electrical energy supply for the freezer compartment is achieved by batteries that are also stored in the cargo compartment of the vehicle. The cargo compartment also comprises a compact oven able for baking at least one pizza-type product in the same time.

**[0013]** The oven that may be used may be an electric oven supplied by batteries, however it is preferably a gas-heated oven comprising a basement made of refractory rocks equipped with gas burners. The oven may also comprise a dome which is also heated thanks to lateral gas burners. The burners may be supplied with gas thanks to gas bottles that are stored in the cargo compartment of the vehicle. The heating of the oven at a temperature of about 300 to 350 °C, with a gradient from about 280 to 300 °C on the basement to about 400 to 450 °C at the top of the dome allows the baking of a frozen pizza made from combined individually frozen ingredients, for example, in about 3 to 4 minutes. Temperature may be regulated inside the oven thanks to temperature probes that act as thermostat and regulator on gas burners. Surprisingly, in such conditions, after 3 or 4 minutes, a frozen pizza may be transformed in a well baked pizza exhibiting gold and crispy crust showing melted cheese, without any burning of the rim or unfrozen or cold topping, for example.

**[0014]** The oven suitable for rapid baking of the pizza-type product according to the present method may be a compact oven that fits the dimension of the storage compartment of the vehicle. Preferably, the oven that may be used is a gas heated oven that exhibits from about 35 to 50 cm high, from about 40 to 60 cm depth and from about 40 to 110 cm width. The width of the oven allows baking one, two or three 10 to 30 cm diameter pizza-type products in the same time. The oven may also be

an electric oven supplied by batteries assuming that the temperature gradient developed allows the rapid baking of a pizza-type product according to the present invention.

**[0015]** The operator who is also the driver of the vehicle can fill the storage freezer at the beginning of the journey with all the individually frozen ingredients from a centralized production platform, for example. Such platform may be a pizza-type product factory, for example. The freezer used for storing all the frozen ingredients is designed and has dimensions fitted in order to be able to store enough frozen ingredients for preparing from about 75 to about 200 pizza-type products using the method according to the present invention. The operator should also be sure that the gas bottles for gas supply are sufficiently filled for at least one day heating and that the batteries are also sufficiently charged for at least one day electrical supply for the freezer and for an electrical oven if used.

**[0016]** The vehicle is designed to have a back and a lateral opening wide enough in order to permit the operator to access to the freezer and to the oven. Thus, once open, the lateral aperture allows the operator to prepare pizza-type products by combining the frozen dough-based products and individually frozen topping ingredients. Indeed, the frozen dough-based product may be disposed on a worktop just in front of the lateral aperture in order to permit the operator to have access to freezer and oven and in the same time be able to welcome the consumer and prepare easily the pizza-type products.

**[0017]** Once the vehicle has reached a delivering zone, the operator may install outside and close to the vehicle, a counter with shelves and a worktop that may be stored in the cargo compartment of the vehicle. This worktop may be parallel to the vehicle and disposed in front of the lateral aperture.

**[0018]** Once a consumer has ordered a pizza-type product, such as a pizza or a focaccia, for example, the operator has at his disposal all the individually frozen ingredients disposed in racks in the freezer in order to customise the desired product. Thanks to the method according to the invention, the preparation is very quickly achieved by disposing all the necessary and pre-established frozen ingredients onto the surface of the frozen dough-based product that are stored behind the operator in the freezer fitted in the cargo compartment of the vehicle. Once the combination operation realized, the pizza-type product may be disposed on the hot basement surface of the heated oven. After about 2 to 4 minutes, a freshly baked, crispy, gold crust and cheese melted pizza or the like may be obtained and can thus be delivered to the consumer, for example. Indeed, between the ordering by the consumer and the delivering, about 3 to 5 minutes elapsed.

**[0019]** The method for preparing and delivering pizza-type product according to the present invention offers numerous advantages. The first is that this method may

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provide freshly baked pizza-type products with full organoleptic qualities of a restaurant-baked product, for example. Further, an other advantage of the present invention is the rapidity and the efficiency either in the preparation and/or baking and/or delivering of the pizza-type product. Finally an other advantage of the present invention is the cost of the production and exploitation. As explained above, the dimensions of the mobile baking-selling unit used according to the invention are reduced, thus the bulkiness of this vehicle is reduced and its price also. The price of the complete vehicle may be lower than 150 000 French francs ; that is much lower than the normal price of other classical pizza trucks. Further, due to the conservation of all the individual ingredients of the pizza-type product as frozen, there is not wasting at the end of the journey if everything has not been used. The remaining items can be stored for the night in a bigger freezer at a central storage platform. The freezer of the vehicle may then be filled again the day after. Indeed, due to the use of individually frozen and calibrated ingredients, the overall quality and cost of the pizza-type products produced thanks to the method according to the present invention is very high and very regular and constant. An other essential point of the present invention is the safety of fabrication of the pizza-type product according to the present method. One of the final advantage of the present invention is that the energetic autonomy of the mobile unit allowing the realisation of the present method in any place also allows travelling of the unit at any place for any time due to the demand of the consumer.

### Claims

1. Method for providing to consumer a freshly baked pizza-type food product using individually frozen ingredients, combining them and baking them in less than 5 minutes ; the individually frozen ingredients and the pizza-type food product being respectively stored and baked in a mobile, compact and energetically autonomous baking-selling unit.
2. Method according to claim 1 in which the baking step is achieved in a gas-heated oven fitted in the mobile unit.
3. Method according to claim 1 in which all the individually frozen ingredients are stored in a freezer fitted in the mobile unit.
4. Method according to claim 1 in which the mobile unit exhibits a length of less than 5 meters and a height of less than 2,5 meters.
5. Method according to claims 1 to 4 in which the mobile unit is a self-powered vehicle.
6. Method according to claims 1 to 5 in which the mobile unit is a vehicle with a driver's compartment and a cargo's compartment whose volume is lower than 3 m<sup>3</sup>.
7. Process for making a freshly baked pizza-type food product comprising the following steps :
  - storing individually frozen pizza-type product ingredients in a freezer disposed in a mobile, compact and energetically autonomous unit,
  - disposing individually frozen topping ingredients on a frozen dough-based product,
  - baking the frozen pizza-type product thus formed in less than 5 minutes in an oven disposed in the mobile unit.



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## EUROPEAN SEARCH REPORT

Application Number  
EP 00 12 2736

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	US 4 919 477 A (BINGHAM LYNN R ET AL) 24 April 1990 (1990-04-24) * figures 1,5,6 * * column 2, line 29-44 * * column 4, line 37-59 * * column 6, line 46-54 * * column 8, line 38-68 * * claims 1,2,9,11,30,31 *	1-7	B60P3/025 F24B1/20 A21D13/00 A21D15/02 A21D8/00
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A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 03, 27 February 1998 (1998-02-27) & JP 09 299017 A (KURUKO JAPAN KK), 25 November 1997 (1997-11-25) * abstract *	1,7	
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B60P F24B A21D A21B B60H
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>29 March 2001</b>	Examiner <b>Piret-Viprey, E</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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